



FOOD AND NUTRITION SUMMER INSTITUTE

LETTER FROM THE EDITOR

I hope everyone is doing well and back home hard at work. This edition covers the USDA Food and Nutrition Summer Institute (FNSI) 2005 and 18th International Congress of Nutrition (ICN) held in Cape Town and Durban, South Africa. Various parts of our trip to South Africa are highlighted including the FNSI, ICN, and study tour. For many of us, it was our first time traveling outside the USA and to the continent of Africa. I hope this trip has inspired each of us, especially the students to play more leading roles in international nutrition related work. There is lots of work to be done in order to meet the world's nutrition needs and challenges. It is within each one of us to take nutrition to the next level and do it in a way that is ethical and respectful to others.

We are truly thankful that our trip was very pleasant without anyone getting sick, robbed or losing luggage. We would like to thank the planning committee, especially

Drs. Harris, Cotton and Chester for their time and efforts in making this experience such a real and memorable one. Their dedication shows they are truly sincere about the work they do in helping to mold young minds along the way. We hope that everyone enjoys the newsletter and that it captures our many memories of the trip.

Chellani S. Hathorn

Student Editor

Tuskegee University



And Take Off!!!

Several students, faculty and government representatives participated in the USDA-FNSI in Cape Town, South Africa. On the morning of September 14, everyone met at Hartsfield-Jackson International Airport - Atlanta whether we drove there or had a connecting flight. Dr. Ellen Harris, USDA/CNRG went over her check list to

ensure that everyone was present. Happily everyone was there. If not you would have missed an opportunity to go to AFRICA. We were all given a FNSI program package and the meeting bags came in handy for carrying all the material we collected. Then it was time for us to board the airplane for our 18.5 hour flight. We boarded the plane, some went to sleep, while others worked.

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A SPECIAL "THANK YOU" TO MRS. LINDA NIX FOR ALL OF HER HARD WORK ON THE SUMMER INSTITUTE

"Every man must decide whether he will walk in the light of creative altruism or in the darkness of destructive selfishness."

..... Martin Luther King, Jr.

A Full Day Study Tour “The Struggle for Freedom”

A full day filled with meetings was followed by a study tour of local communities. Although many of us still were experiencing a bit of jetlag, we loaded the tour bus at our hotel and headed outside of the city.

The first stop was IKHWEZI Community Center. This place was remarkable in so many ways. The spirit of the ladies there was unbelievable. The Center’s goal was to help disadvantaged women and children, whose lives had been affected by poor economic development, a struggling education system and the AIDS epidemic. For the most part, we hope that everyone was touched by what we experienced and that you make an effort to contribute to this worthy cause.

Our next stop was District Six Museum. District Six, named after the Sixth Municipal District of Cape Town, was an area where South Africans were forced to leave in 1965. While their houses were being torn down and flattened by bulldozers, many of the people were forced into an area known as the “Cape Flats.” The museum captures this movement and the lives of those that were affected.

Robben Island Prison, located off the shores of Cape Town was our last stop. Nelson Mandela spent over twenty

years as a prisoner there fighting against apartheid and for human rights for all South Africans.

Some of us have experienced unequal justice or hardships during our time, whether it directly affected our lives or maybe a parent or grandparent passed along the information. Hopefully, this study tour was a profound learning experience that will help each of us to be sensitive to the needs of people everywhere.



TYPICAL PRISON CELLS ON ROBBERN ISLAND



GROUP AT DISTRICT SIX MUSEUM

Roll Call of 2005 Summer Institute Participants

USDA

USAID

CDC

Alabama A & M University

Auburn University

Howard University

North Carolina Central University

Purdue University

Southern University

Tuskegee University

University of the Western Cape



STELLA NASH (USDA), ESTHER OKEYI (NCCU), ANN WARREN (AAMU), PAUL COTTON, GERALDINE PERRY-ALLEN AND ANNIE CARR (CDC) OUTSIDE THE ICN CONFERENCE CENTER



DR. HARRIS, KAJUANDRA HARRIS-HUNTLEY & DR. BOVELL-BENJAMIN WITH SOME OF THE IKHWEZI LADIES POSING FOR THE CAMERA



FNSI PARTICIPANTS LISTEN AS IKHWEZI SCHOOL TEACHER DISCUSSES CLASS ACTIVITIES AND ATTENDANCE BY CHILDREN IN THE COMMUNITY



A TOUCH OF SPICE AT A LOCAL DURBAN MARKET

Dr. Paul Cotton Gets a Promotion

Dr. Paul Cotton started his new position at the National Institutes of Health (NIH) on Monday, October 31, 2005. Dr. Cotton will be working as a Program Director with the NIH National Institute of Nursing Research in health promotion and risk reduction in adults.

Dr. Cotton has been with USDA's Community Nutrition Research Group for the past five years. He was a tremendous asset to the group and will be greatly missed.



Drs. QuClock-Knopp, Chenault, Harris & Cotton at the 2004 Summer Institute



Dr. Cotton at the 2004 Summer Institute



Dr. Cotton & Joseph Mutuku at ICN, Durban, South Africa



Drs. Cotton, Gary-Vaughn, and McWhinny at the 2004 Summer Institute



Drs. Cotton and Dionne Toombs at the 2003 Summer Institute

A Celebration of the Life of Dr. Cecile Hoover Edwards

Dr. Cecile Hoover Edwards passed away September 17, 2005. Dr. Edwards received her B.S. & M.S. degrees from Tuskegee Institute (now Tuskegee University), and a PhD from Iowa State. After graduation in 1950, she returned to Tuskegee as a faculty member and researcher, serving as chair of the Department of Foods and Nutrition, School of Home Economics from 1952 to 1956. She met her husband, Dr. Gerald A. Edwards and married in June 1951.

Dr. Edwards moved to Washington, DC in February, 1971. She joined the faculty of the Department of Home Economics at Howard University as Professor of Nutrition and later became Chariman. Dr. Edwards established the PhD program in Nutrition at Howard University, the only such program at a predominately African American university in the United States.

Dr. Edwards was a much sought after consultant. She served on advisory boards for NIH, USDA, and the White House.

Dr. Cecile Hoover Edwards, scholar, educator, administrator, researcher, humanitarian, was an outstanding role model, mentor, wife, and mother.



USDA Food and Nutrition Summer Institute Honored

The USDA Food and Nutrition Summer Institute received the USDA Beltsville Area (BA) **2005 Equal Employment Opportunity/Civil Rights Award**. The USDA Food and Nutrition Summer Institute team which is comprised of people within and outside of USDA was recognized for outstanding leadership in the creation of the Summer Institute, a unique program within USDA to facilitate a strong, diverse workforce in food and nutrition research and education. BA

employees included Dr. Ellen Harris, Dr. Paul Cotton, Dr. Deirdra Chester, and Mrs. Linda Nix, all of the Community Nutrition Research Group, Beltsville Human Nutrition Research Center. Others recognized outside of BA were Dr. Gladys Gary Vaughn (USDA), Annie B. Carr (CDC), Camille Brewer (FDA), Patricia Daniels (USDA), Cheryl Jackson (USAID), Dr. Grayson CuQlock-Knopp (US Army), and Dr. Michelle Chenault (FDA).



Dr. Phyllis Johnson, BA Director with some of Summer Institute team

The Students' Perspectives on the 18th International Congress of Nutrition

General Impressions of the ICN

As a result of participating in the USDA Food and Nutrition Summer Institute (FNSI) and International Congress of Nutrition (ICN) I was afforded the opportunity to be exposed to the latest international nutrition research. This year the focus of the ICN was “improving the nutrition status of children,” and was of particular interest to me because it is also my area of research. I was introduced to numerous research efforts and international initiatives established to address the incidence of childhood overweight which leads to severe health consequences in adulthood. For example, the collaborative efforts of nonprofit organizations and federal agencies to address health and disease issues were discussed. Also, the United Nations Millennium Development Goals (MDG) which outline eight specific goals to improve global health were reviewed.

During the ICN, I was able to interact with researchers and students from different countries, view posters and attend symposia, which were very informative and thought provoking. These all provided me with a more accurate picture of the nutritional status of the world. For instance, I found the symposium topics of global strategies to prevent non-communicable diseases, food security, developmental origins of disease, the global problem of obesity, globalization, childhood obesity, nutritional status assessment, and leadership development for the young nutritionists to be most beneficial.

The opportunity to attend an international conference is a significant intercultural experience that few people achieve and provides an opportunity to learn and experience things that cannot be found in a textbook or classroom.

By Kajuandra Harris-Huntley, Auburn University



Kajuandra Harris-Huntley, Tiffanie Yates, and Dr. Chester at the ICN poster session.

Whole Grains, Protection Against Coronary Heart Disease, Diabetes Mellitus, and Cancer

This presentation highlighted how for the first time the 2005 Dietary Guidelines reflect a numerical number for whole grain servings. Whole grains have proven to be instrumental in lowering cholesterol, helping control glucose levels, protecting against coronary heart disease, and providing antioxidants to help fight cancer. To begin, the definition of a whole grain is any food made with the entire seed. If the kernel has been cracked, crushed, or flaked, it must maintain the same proportion of bran, germ and endosperm. Whole grains are known for their fiber content. However, fiber content in whole grain foods vary due to water content, amount of bran and the type of food. Examples of whole grain foods which were presented: wheat, corn, barley, amaranth, quinoa, buckwheat, teff, oats, and rye. Grain refining which is the preferred method consists of the removal of the germ and bran layer which enhances the desirability and lengthens shelf life. However, during this process grains are stripped of their essential nutrients which make them less healthy. Various studies have found positive correlations between whole grains and coronary heart disease. One study discussed at the presentation, The Iowa Women's Study, found that those who ate 1 or more servings of whole grains per day reduced their risk of ischemic heart disease by 30-60%. Whereas, another study, The ARIC Study, found that those who ate three or more servings of whole grains per day reduced their risk of coronary artery disease by 28%. The presenters concluded that whole grains are vital to health and in fighting nutrition related diseases.

By Tiffanie Yates, Howard University

The Students' Perspectives – Continued

Econutrition: Safe & Sustainable Food Supply

Econutrition is a combination of the words where ecology is the interrelation of organisms and their environment and nutrition is the act of being physically supported (nourished). Therefore, econutrition is defined as providing a stable diet for people who live in different environments. Since the 1970's sub-Saharan Africa has experienced a decline in its food supply per capita. The depletion of its soil fertility has cost Africa \$11 billion per year. The loss of biodiversity due to erosion has increased agricultural and environmental degradation creating an increase in malnutrition. The Earth Institute, Columbia University (CU), established the Millennium Villages Project to bring together scientists, ecologists, and others in the field to work on econutrition and bring about economically self-sustaining communities in some "hot spots" already seen in Africa. Forty-three percent of the villagers have malaria, 50% are anemic, and 46% of the villagers have a combination of anemia and malaria. Of the children under age seven, 85% are anemic. The criteria for selecting the villages to participate in the project were: hunger/poverty hot spots, reasonably well governed and committed to achieving the MDGs (Millennium Development Goals), well established relationships between the Earth Institute and the CU faculty, and empower the villages to achieve the MDGs.

Two sites were discussed – the Sauri sublocation (10 villages in Ethiopia) and Koraro Tabia (3 villages in Kenya). Each village elected committees which were trained in areas of management, governance, empowerment, and technical aspects. After baseline assessments, the following nutrition and health interventions were planned: HIV testing, school meal programs, hygiene/sanitation, maternal/child health, village clinic and health center, getting a village vehicle, and establishing macro/micronutrient programs. These interventions will review many avenues to decide on the best programs for the villages and those that are in greatest need. Some of the programs being developed are: school meal programs, potable water and sanitation, securing village vehicles, promoting community health, and HIV/ARV nutrient program. Once these programs are in place and thriving, this project can be duplicated and improved on for other villages in need.

Cecilia Patterson said, *"I really wanted to attend this seminar because I think that it's not only important to come in and teach villagers about nutrition, but I thought that it was wonderful that the end result was to ensure that the village, once left alone, could be self-sustaining."*

By Cecilia Patterson, North Carolina Central University & Kristen Campbell, Alabama A & M University



Cecilia Patterson, Tiffany Williams, and Kristen Campbell at ICN poster and oral sessions.



Obesity and its Co-morbidities in Adults- Risk Factors for Obesity Development and the Impact on Health

This presentation considered the worldwide rise of adult obesity, the associated prevalence of insulin resistance metabolic syndrome, and the impact of these on the health of individuals and the population. Insulin resistance metabolic syndrome includes the following: central/abdominal obesity, hypertension, type 2 diabetes mellitus, and coronary heart disease. These side effects are more likely to increase with adiposity. The dietary risk factors associated with an increase in obesity include: increase dietary fat, increase soft drink consumption, passive over consumption of energy, erratic eating patterns, and omitting breakfast. Decreased physical activity is also associated with obesity. In many parts of the world physical activity has decreased due to the industrialization of many countries including those where metabolic syndrome is present including: the United States, Pacific Islands, Mexico, India and even countries where under nutrition is present. Presenters also reviewed genetic susceptibility to obesity and found that genetics play a role in very few cases; an example is the Pima Indians. The recommendations to decrease the risk for obesity and metabolic syndrome are as follows: consume 2500 calories or less per day, exercise 90 minutes per day, and not omit any meals. It is also essential to create "good" dietary and physical activity patterns early in life because once dietary habits are established they are usually followed for life.

By Tiffany A. Williams, Southern University

The Students' Perspectives – Continued

Nutrition Solutions to Major Health Problems of Pre-school children

The session “Nutrition solutions to major health problem of pre-school children: How to optimize growth and development?” covered three areas: i) causes, ii) impact, and iii) solutions to nutrition related public health problems of pre-school children. Several nutritionists provided the challenges, case studies, and speculations as to why so many children have nutrient deficiencies, and ways of correcting these problems. Internationally, there are two major health concerns that affect preschool children. The first health concern is under-nutrition, which is a contributor to many deficiencies that affect this specific population. In the year 2005, the 5th World Nutrition Report projected 46 million children being wasted and 147 million children exhibiting growth retardation. The number of wasted or both wasted and stunted children has decreased in some countries, however, in Sub-Saharan Africa it has increased. Iron (anemia), vitamin A, and iodine deficiencies and protein energy malnutrition are the most common under-nutrition problems that affect preschool children.

Under-nutrition is caused by the lack of household access to sufficient food and due to food shortages caused by economic, environmental, or other problems. Nutrient depletion is often present in early preschool children due to maternal depletion and high nutrient requirements. Maternal depletion of nutrients during breastfeeding can lower the amount of nutrients in breast milk that the infant consumes and cause very early depletion in the young child. Pre-school children have a high nutrient requirement and most households have a poor dietary quality, either due to lack of animal source foods, consuming only plant source foods, or problems related with caretaker awareness of the appropriate nutritional practices for young children. Some ways to combat these nutrition concerns in pre-school children, especially in developing countries, is to educate the caretaker and incorporate more scarce foods such as animal source foods and dairy products with readily available plant source foods.

Amazingly, the development of many emerging world economies and improvement of malnutrition problems can lead to another health concern. The second health concern affecting young children is the rise in the obesity epidemic. In the year 2000, there were 30-45 million obese children globally with 10% aged 5-17 years being overweight and 2-3% being obese. This epidemic leads to an increase in morbidity, mortality, and health costs. Obesity has shifted from a genetic problem to more of an environmental problem, which includes an increase in energy intake and decrease in energy expenditure. This problem can be improved by educating caretakers on the FAO/WHO/UNU 2004 recommendations of physical activity of children to maintain fitness and health. Increasing physical activity will help to reduce the risk of developing obesity and diseases associated with sedentary lifestyles.

Improving malnutrition can possibly lead to a rise in obesity. Therefore, more nutrition research and interventions need to be conducted to improve this serious situation that affects pre-school children. Researchers need to have more of a life course approach to malnutrition and obesity prevention. Hopefully, increasing knowledge of what contributes to malnutrition in the fetus can help explain malnutrition in infancy and childhood. Understanding fetal, infancy /childhood, and adolescent lives will help explain obesity in adulthood and elderly. Scientific leadership at the national level will be necessary to facilitate more nutrition interventions in developing countries that lack this type of intervention. Also, increasing the education of women will help improve their overall status in general and the health and nutrition status of children. Malnutrition and obesity are an international health concern that can not be disregarded as only affecting certain countries. In order for malnutrition and obesity to be resolved, there needs to be more of a global approach to the solutions of these health concerns which affect developed and developing countries. The researchers also agreed that there should be an increase in animal source foods (ASF) for younger children to alleviate this major health problem. ASF were promoted for consumption in developing countries. These foods improve the ability to meet children's minimal nutrient requirements, but only when intake is above a certain amount.

Chellani said *“The sessions were very informative and they gave me the opportunity to listen to experts from various parts of the world on nutrition issues. Overall, the ICN was a great experience providing me with valuable information in a relaxed atmosphere.”*

By Chellani Hathorn, Tuskegee University & April Stull, Purdue University

Summer Institute Photo Gallery



DR. RINA SWART, UNIVERSITY OF THE WESTERN CAPE



DR. ELLEN HARRIS, USDA



DR. JAMES H. AMMONS, CHANCELLOR, NCCU



EVERYONE PAYING CLOSE ATTENTION TO THE PRESENTATIONS

September 16, 2005 FNSI Conference



MS. ANNIE CARR, CDC



SHIRLEY WATKINS, SHIRLEY WATKINS & ASSOCIATES SPEAKING AT FNSI CLOSING



GET MOVIN' BREAK AT THE CONFERENCE



SAULI AND BRIDE ESAU, OUR STUDY TOUR GUIDES



ANN WARREN, AAMU



LANGA, ONE OF THE OLDEST TOWNSHIPS IN CAPE TOWN



DR. BOVELL-BENJAMIN, TUSKEGEE UNIVERSITY & AN IKHWEZI STAFF MEMBER

September 17, 2005 Study Tour



DR. PERRY— ALLEN, CDC & AN IKHWEZI GRANDMOTHER (GOGO)



TWO OF THE CRAFTS WOMEN AT IKHWEZI



PICTURE OF IKHWEZI CHILDREN SHOWING APPRECIATION FOR DR. BOVELL-BENJAMIN'S SCHOOL SUPPLY GIFT



A CONVERSATION WITH SOME OF THE IKHWEZI WOMEN

September 19-24,
2005
ICN



Summer Institute 2005 Group Photo



TIFFANY, KRISTEN & CECILLIA
ATTENDING A SESSION



APRIL STULL AT HER ICN POSTER



ZULU WOMEN DOING
TRADITIONAL WEAVING



DR. OKEIYI, NCCU, DISCUSS-
ING HER POSTER DURING THE
ICN POSTER SESSION



ELLEN HARRIS, GERALDINE
PERRY-ALLEN, STELLA NASH,
PAUL COTTON & ANNIE CARR
ATTEND A SESSION



DR. HARRIS AND ZULU DANCERS



DR. DONNIE COOK, AAMU, AT
HER ICN POSTER



DEIRDRA CHESTER, PAUL
COTTON, CHERYL JACKSON
(USAID), AND JAY HIRSCHMAN
(USDA) AT THE ICN POSTER
SESSION



OUR CLOSING NIGHT DINNER

Healthy Eating Recipe

French Onion Soup



Nutrition Per

Calories	240
Total Fat	11g
Saturated Fat	4.5g
Cholesterol	20g
Sodium	580mg
Carbohydrate	26mg
Dietary Fiber	2g
Sugars	5g
Protein	10g
Vitamin A	6g
Vitamin C	4g
Calcium	20g
Iron	8g

Ingredients:

2Tbsp. margarine or butter
3 large Spanish, onions, peeled, sliced
1 can (14 - 1/2) beef broth
3 cups cold water
1 bay leaf
6 slices French bread, toasted
1 cup Shredded Swiss Cheese
1/4 cup 100% Grated Parmesan Cheese

MELT– margarine in skillet on medium heat. Add onions; cook about 15 minutes or until golden brown, stirring frequently. Add broth, water and bay; stir. Cover; simmer 15 minutes. Remove and discard bay leaf.

PREHEAT– broiler. Ladle hot soup evenly into 6 oven-proof bowls. Top each bowl of soup with a toast slice. Sprinkle evenly with cheese

BROIL– 5 to 10 minutes or until cheese golden brown

Source: <http://www.kraftfoods.com>

Visit us online @

<http://www.ba.ars.usda.gov/cnrg/research/fnsi>

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